

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

549015WO01

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2005/002168

International filing date (day/month/year)

14.02.2005

Priority date (day/month/year)

17.02.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant

MITSUBISHI DENKI KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/002168

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/002168

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims	7, 10	YES
	Claims	1-6, 8, 9, 11-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO
2. Citations and explanations:			
<p>Document 1: CD-ROM of the specification and drawings annexed to the request of Japanese Utility Model Application No. 18300/1993 (Laid-open No. 77469/1994) (Sanwakizai Co Ltd), 28 October 1994, paragraphs 0008-0013, Figs. 1 and 2 (Family: none)</p> <p>Document 2: JP 2001-318008 A (Toyota Motor Corp), 16 November 2001, pgs 0096-0102, Fig. 9 & US 2002/0006154 A1 & EP 1154251 A1 & CN 1322940 A</p> <p>Document 3: JP 5-344685 A (Fuji Electric Co Ltd), 24 December 1993, paragraph 0012, Fig. 1 (Family: none)</p> <p>The inventions of claims 1-4, 8, 9, and 11-13 do not appear to involve an inventive step over documents 1 and 2 cited in the ISR. The rotating electric machine described in document 1 having a temperature measuring means provided near a stator winding wire for estimating the temperature of the stator winding wire and the means described in document 2 for estimating the temperature of a stator winding wire based on the sum of the stator core temperature and a corrected value both belong to closely related technical fields, and therefore a person skilled in the art could easily conceive of applying the temperature estimating means described in document 2 to the rotating electric machine described in document 1 having the means for estimating the stator winding wire temperature.</p> <p>The inventions of claims 5 and 6 do not appear to involve an inventive step over documents 1-3 cited in the ISR. Document 3 discloses correcting an estimate value of a stator winding wire temperature using a value determined by the secondary function of the value of the wire current flowing through the stator winding wire.</p> <p>The inventions of claims 7 and 10 appear to involve an inventive step over the documents cited in the ISR. Documents 1-3 do not describe calculating the time average of an estimated value of a stator winding wire temperature or stopping an engine which is rotationally driven by a winding electric machine when a vehicle stops if an estimated value is equal to or less than a prescribed value, nor could a person skilled in the art easily conceive of this.</p>			